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 File 35:Dissertation Abstracts Online 1861-2001/May  
 (c) 2001 UMI

| Set | Items   | Description   |
|-----|---------|---|
| S1  | 50218   | VOCODER OR VODER OR (VOICE? OR SPEECH) (3N) (SYNTHE? OR RESYN-<br>NTH? OR CODE? ? OR CODING OR DECOD??? OR ENCOD???) OR (SOUND?<br>OR VERBAL OR VOCAL? OR SING? OR WORD? ?) (3N) (SYNTHE? OR RESYN-<br>THE?)                      |
| S2  | 1840313 | VECTOR? OR DSP OR DSPS OR SIGNAL? ?(1N)PROCESS???? OR MATR-<br>IX? OR MATRICES OR ARRAY?(1W)PROCESS???  |
| S3  | 400926  | SCALAR? OR PROTOCOL?  |
| S4  | 183310  | MULTIPROCESS? OR (MULTI OR MULTIPLE OR MANY OR SEVERAL OR -<br>PLURAL? OR NUMEROUS OR MORE(1W)ONE OR THREE) (4W) (PROCESS???? -<br>OR MICROPROCESS????)   |
| S5  | 26742   | (CELL OR CELLULAR OR MOBILE OR PORTABLE OR WIRELESS OR HAN-<br>DHELD OR HAND()HELD OR CORDLESS OR RADIO OR WITHOUT(2W) (CORD?<br>? OR WIRE OR WIRES)) (5W) (TELEPHONE? OR PHONE OR PHONES) OR RA-<br>DIOPHONE? OR RADIOTELEPHONE? |
| S6  | 0       | S5 AND S4 AND S1 AND S2 AND S3  |
| S7  | 48      | S5 AND S4 AND (S1 OR S2 OR S3)  |
| S8  | 31      | S7 NOT PY,CY=1998:2001  |
| S9  | 18      | S8 NOT PY,CY=1995:1997  |
| S10 | 14      | S9 NOT PY,CY=1992:1994  |
| S11 | 11      | RD (unique items)   |
| S12 | 2       | AU=(GHAUVEL, G? OR GHAUVEL G? OR AUSSEDAT, F? OR AUSSEDAT -<br>F? OR CALIPPE, P? OR CALIPPE P?)   |
| S13 | 6850    | S12 OR TEXAS()INSTRUMENT?   |
| S14 | 2       | S13 AND (PROTOCOL?(2N)PROCESSOR? OR (S4 AND S5))  |
| S15 | 2       | RD (unique items)   |
| S16 | 56      | AU=(CLAESSON, I? OR CLAESSON I?) AND AU=(NORDHOLM, S? OR N-<br>ORDHOLM S? OR BENGTTSSON, B? OR BENGTTSSON B? OR ERIKSSON, P? OR<br>ERIKSSON P?)   |
| S17 | 3       | S16 AND (DSP OR TELEPHONE?) AND S4  |
| S18 | 2       | S17 NOT S11   |

11/5/1 (Item 1 from file: 2)  
DIALOG(R)File 2:INSPEC  
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04117129 INSPEC Abstract Number: B9205-6250F-035

**Title: Signaling architecture for microcell communication systems**  
Author(s): Tanaka, K.; Hirono, M.; Horikawa, I.  
Author Affiliation: NTT, Yokosuka, Japan  
Conference Title: 41st IEEE Vehicular Technology Conference. Gateway to the Future Technology in Motion (Cat. No.91CH2944-7) p.240-4  
Publisher: IEEE, New York, NY, USA  
Publication Date: 1991 Country of Publication: USA 924 pp.  
ISBN: 0 87942 582 2  
U.S. Copyright Clearance Center Code: CH2944-7/91/0000-0240\$01.00  
Conference Sponsor: IEEE  
Conference Date: 19-22 May 1991 Conference Location: St. Louis, MO, USA

Language: English Document Type: Conference Paper (PA)  
Treatment: Applications (A); Practical (P)  
Abstract: A signaling architecture suitable for the next generation of **cordless telephone** systems is presented. A **three**-phase link setup **process** (THREP), which consists of a radio channel access phase, a link connecting phase, and a transmission phase, is proposed. Because the phases can be defined independently of each other, a flexible signaling architecture is introduced to meet different requirements such as service integration, various applications, and spectrum efficiency. The basic implementation of THREP is also presented. (9 Refs)

Subfile: B  
Descriptors: cellular radio; **cordless telephone** systems; **protocols** ; signalling (telecommunication networks)  
Identifiers: **protocol** ; microcell communication systems; signaling architecture; **cordless telephone** systems; **three**-phase link setup **process** ; radio channel access phase; link connecting phase; transmission phase; service integration; spectrum efficiency; THREP  
Class Codes: B6250F (Mobile radio systems); B6210D (Telephony); B6150M (Protocols)

11/5/2 (Item 2 from file: 2)  
DIALOG(R)File 2:INSPEC  
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03910745 INSPEC Abstract Number: B91046795

**Title: DSP with integrated codec**  
Author(s): Furtner, P.  
Journal: Elektronik vol.40, no.1 p.75-7  
Publication Date: 8 Jan. 1991 Country of Publication: West Germany  
CODEN: EKRKAR ISSN: 0013-5658  
Language: German Document Type: Journal Paper (JP)  
Treatment: Applications (A); Practical (P)  
Abstract: A **signal processor** with integrated sigma delta codec, which makes it possible to add or multiply two 16-bit numbers during an order cycle has been developed by AT&T specially for the digital **cellular mobile telephone** market. Since multiplication and addition functions occur in **many speech processing** algorithms, this feature increases the performance of the processor and thus also of the telephone system. (0 Refs)

Subfile: B  
Descriptors: cellular radio; codecs; delta modulation; digital **signal processing** chips; speech analysis and processing  
Identifiers: multiplication functions; digital **signal processor** ; integrated sigma delta codec; order cycle; digital **cellular mobile telephone** market; addition functions; speech processing algorithms; telephone system  
Class Codes: B6250F (Mobile radio systems); B1265F (Microprocessors and microcomputers); B6130 (Speech analysis and processing techniques); B6220C (Telephone stations)

11/5/3 (Item 3 from file: 2)  
DIALOG(R)File 2:INSPEC  
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03901834 INSPEC Abstract Number: B91041256, C91043708

**Title: A multi- DSP implementation of a broad-band adaptive beamformer for use in a hands-free mobile radio telephone**

Author(s): Claesson, I.; Nordholm, S.E.; Bengtsson, B.A.; Eriksson, P.

Author Affiliation: Dept. of Telecommun. Theory, Lund Univ., Sweden

Journal: IEEE Transactions on Vehicular Technology vol.40, no.1, pt.2  
p.194-202

Publication Date: Feb. 1991 Country of Publication: USA

CODEN: ITVTAB ISSN: 0018-9545

U.S. Copyright Clearance Center Code: 0018-9545/91/0200-0194\$01.00

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P); Theoretical (T); Experimental (X)

Abstract: An implementation of a broadband adaptive array on a **multiprocessor digital signal processing** system for use in a hands free **mobile radio telephone** is described. This implementation of a five-microphone adaptive Griffiths-Jim array can handle FIR filters with up to 128 taps behind each microphone at a sampling rate of 8 kHz. The filter structure makes it possible to combine an adaptive array with a noise canceler. The near-field problem has been solved by using focusing, a speech-controlled adaptive algorithm, and a short hourglass. Preliminary measurements indicate a considerable potential for this technique in hands-free mobile telephony. The array gives a 20-30 dB suppression of a broadband jammer covering 300-1100 Hz, even with three reflecting walls surrounding the microphone. (29 Refs)

Subfile: B C

Descriptors: computerised **signal processing** ; interference suppression ; microphones; mobile radio systems

Identifiers: **multiprocessor** system; interference suppression; multi-DSP implementation; broad-band adaptive beamformer; hands-free **mobile radio telephone** ; adaptive array; digital **signal processing** system; five-microphone adaptive Griffiths-Jim array; FIR filters; sampling rate; filter structure; noise canceler; near-field problem; focusing; speech-controlled adaptive algorithm; short hourglass; mobile telephony; broadband jammer; reflecting walls; 8 kHz; 300 to 1100 Hz

Class Codes: B6250F (Mobile radio systems); B6140 (Signal processing and detection); C7410F (Communications); C5260 (Digital signal processing)

Numerical Indexing: frequency 8.0E+03 Hz; frequency 3.0E+02 to 1.1E+03 Hz

11/5/4 (Item 4 from file: 2)  
DIALOG(R)File 2:INSPEC  
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03806707 INSPEC Abstract Number: B91012001, C91012690

**Title: Development of advanced mobile telephone P3 (personal pocket phone)**

Author(s): Tamura, Y.; Yonehata, A.; Miyazaki, S.; Kobayasi, F.; Fukuda, Y.; Kamishiro, J.

Author Affiliation: Mobile Media Terminals Div., NEC Corp., Tokyo, Japan

Journal: NEC Research and Development no.98 p.60-71

Publication Date: July 1990 Country of Publication: Japan

CODEN: NECRAU ISSN: 0547-051X

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P); Product Review (R)

Abstract: A **handheld cellular telephone** has been developed for AMPS and TACS (ETACS) cellular systems. Using newly developed LSIs and surface mount technology, the telephone (P3 series) accounted for half the volume of NEC's existing product (9 series). The functions of the P3 are controlled by **three microprocessor** CPUs which form the logic board of device. To ensure long talk time, an automatic efficiency control technique for a GaAs FET power amplifier has been developed. Accessory expandability

and transceiver controllability have been improved upgrading the interface **protocol**. The phone is manufactured by a new state of the art production line, such as laser soldering and assembly robots. The authors also describe the optional products developed for the new telephone. (2 Refs)

Subfile: B C

Descriptors: cellular radio; microcomputer applications; radiotelephony; telecommunications computer control; telephone sets

Identifiers: total access communications system; **mobile telephone**; personal pocket phone; **handheld cellular telephone**; AMPS; TACS; cellular systems; P3 series; microprocessor; automatic efficiency control technique; FET power amplifier; transceiver controllability; interface **protocol**; production line; laser soldering; assembly robots; GaAs

Class Codes: B6250F (Mobile radio systems); B6220C (Telephone stations); B6210D (Telephony); C7410F (Communications); C7420 (Control engineering); C3370C (Telephony); C3370H (Radio and radar)

Chemical Indexing:

GaAs int - As int - Ga int - GaAs bin - As bin - Ga bin (Elements - 2)

11/5/5 (Item 5 from file: 2)

DIALOG(R) File 2:INSPEC

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03629473 INSPEC Abstract Number: B90039599

**Title: An efficient demand-assignment multiple-access scheme for satellite mobile radio dispatch networks**

Author(s): Leung, V.C.M.; Ali, M.O.; Spolsky, A.I.

Author Affiliation: Dept. of Electron., Chinese Univ. of Hong Kong, Shatin, Hong Kong

Journal: IEEE Transactions on Vehicular Technology vol.38, no.4 p. 204-10

Publication Date: Nov. 1989 Country of Publication: USA

CODEN: ITVTAB ISSN: 0018-9545

U.S. Copyright Clearance Center Code: 0018-9545/89/1100-0204\$01.00

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P); Theoretical (T)

**Abstract:** Conventional DAMA (demand-assignment **multiple** access) designs **process** mobile radio calls in much the same way as **mobile telephone** calls. In mobile radio dispatch networks, where the dispatcher is often the resource bottleneck, these designs result in the inefficient use of satellite channels. A novel DAMA design is presented that ameliorates this problem by using the block-calls-queued service discipline, batched processing of several calls by the network dispatcher, and pipelined messaging for channel setup verification. Analysis shows that the proposed design offers advantages in satellite channel utilization and DAMA signaling overhead compared to previous designs. As space segment resources are expected to be very expensive in the mobile satellite systems networks under development, the proposed procedures could result in significant cost savings. (13 Refs)

Subfile: B

Descriptors: demand assigned multiple access; mobile radio systems; satellite relay systems

Identifiers: signalling **protocol**; demand-assignment multiple-access scheme; satellite mobile radio dispatch networks; DAMA; block-calls-queued service discipline; batched processing; pipelined messaging; channel setup verification

Class Codes: B6250F (Mobile radio systems); B6250G (Satellite relay systems); B6150 (Communication switching theory)

11/5/6 (Item 6 from file: 2)

DIALOG(R) File 2:INSPEC

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03312954 INSPEC Abstract Number: B89013624

**Title: ITG Fachtagung: Mikroelektronik fur die Informations-Technik (ITG Meeting: Microelectronics for Information Technology)**

Journal: ITG-Fachbericht 2 vol.103  
Publication Date: 1988 Country of Publication: West Germany  
CODEN: ITGFEY ISSN: 0341-0196  
Conference Title: ITG Fachtagung: Mikroelektronik für die  
Informations-Technik (ITG Meeting: Microelectronics for Information  
Technology)  
Conference Date: 3-5 Oct. 1988 Conference Location: Berlin, West  
Germany  
Language: German Document Type: Conference Proceedings (CP); Journal  
Paper (JP)

Abstract: The following topics were dealt with: VLSI components for  
telecommunications; submicron bipolar technology for digital switching  
systems; integrated optoelectronics; optical communication equipment;  
digital GaAs technology; digital optical computer; **signal processors** ;  
video **signal processing** ; HDTV components; Si bipolar ICs for digital  
transmission systems; VLSI **multiprocessor** ; gate array technology; ASICs;  
CMOS and BiCMOS circuit technology; semicustom circuits; equalisers;  
circuit CAD; ISDN components; narrowband videotelephone implementation;  
digital **radiotelephone** realisation; and VLSI impact on computer networks  
and LANs. Abstracts of individual papers can be found under the relevant  
classification codes in this or other issues.

Subfile: B

Descriptors: digital integrated circuits; monolithic integrated circuits;  
telecommunication equipment; telecommunication services; telecommunication  
systems; VLSI

Identifiers: monolithic IC; microelectronics; information technology;  
VLSI; telecommunications; submicron bipolar technology; digital switching  
systems; integrated optoelectronics; optical communication equipment;  
digital optical computer; **signal processors** ; video **signal processing**  
; HDTV components; digital transmission systems; **multiprocessor** ; gate  
array technology; ASICs; CMOS; BiCMOS; semicustom circuits; equalisers;  
circuit CAD; ISDN components; narrowband videotelephone; digital  
**radiotelephone** ; computer networks; LANs; digital GaAs technology; Si

Class Codes: B0100 (General electrical engineering topics); B2570 (Semiconductor integrated circuits); B1265 (Digital electronics); B6200 (Telecommunication)

Chemical Indexing:

GaAs int - As int - Ga int - GaAs bin - As bin - Ga bin (Elements - 2)  
Si int - Si el (Elements - 1)

11/5/7 (Item 1 from file: 144)

DIALOG(R) File 144:Pascal

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10796393 PASCAL No.: 93-0305749

**Sixth international conference on mobile radio and personal  
communications, 9-11 December 1991, Coventry**

Verband deutscher Elektrotechniker, Frankfurt-am-Main, Federal Republic  
of Germany.; Radio Society of Great Britain, London, United Kingdom.;  
Mobile Radio Users' Association, Terra incognita.; IEEE, New York NY, USA.;  
Federation of Communication Services, Terra incognita.; Royal Institute of  
Navigation, Terra incognita.; Electronic Engineers Association, Terra  
incognita.; Convention of National Societies of Electrical Engineers of  
Western Europe, Frankfurt-am-Main, Federal Republic of Germany.;  
Institution of Electrical Engineers. Electronics Division, London, United  
Kingdom.

International conference on mobile radio and personal communications, 6  
(Coventry) 1991-11-09

Journal: IEE conference publication; IEE conference publication, 1991 (351) XI, 315 p., ill., index Non-paginated pages/foldouts

ISSN: 0537-9989 CODEN: IECPB4 Availability: INIST-12497;  
354000011265650000

No. of Refs.: dissem.

Document Type: P (Serial); C (Conference Proceedings) ; M (Monographic)

Country of Publication: United Kingdom

Language: English Summary Language: English

English Descriptors: Mobile radiocommunication; Congress; Transmission channel; Modulation; Coding; Access **protocol** ; **Multiple** access; **Signal processing** ; Planning; Cell network; Radiofrequency; Facsimile; Local network; Radiolocalisation; Routing; Data transmission; Speech transmission; Satellite telecommunication; Simulator; **Cordless telephone**

French Descriptors: Radiocommunication service mobile; Congres; Canal transmission; Modulation; Codage; **Protocole** acces; Acces multiple; Traitement signal; Planification; Reseau cellulaire; Radiofrequence; Telecopie; Reseau local; Radiolocalisation; Acheminement; Transmission donnee; Transmission parole; Telecommunication par satellite; Simulateur; Londres; Decembre 91; Telephone sans fil

Classification Codes: 001D04B04G2

11/5/8 (Item 1 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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01404675 JICST ACCESSION NUMBER: 91A0954482 FILE SEGMENT: JICST-E

**Object-Oriented Design for Telecommunication Control Softwares.**

KAJIHARA KIYOHICO (1); YAMAZAKI SEIICHI (1); ITO MITSUTAKA (1); HORI MASAHIRO (1)

(1) Nippon Telegraph & Telephone Corp., Soft Ware Laboratories  
NTT R D, 1991, VOL.40,NO.11, PAGE.1423-1430, FIG.2, TBL.1, REF.9

JOURNAL NUMBER: F0137ACY ISSN NO: 0915-2326

UNIVERSAL DECIMAL CLASSIFICATION: 681.3.02.001 621.391.1

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: Object-Oriented Design (OOD) is a promising approach that can improve the maintainability and reliability of software. This paper presents an OOD technique for practical telecommunication systems, which called Real-Time OOD, and its application results. The design process of Real-Time OOD is to: model a telecommunication system, identify objects and the relationship between objects defined according to the telecommunication system models, and to define the physical object model by considering environment conditions. We apply Real-Time OOD to the design of a radio line control component in a **cellular phone** system. Compared with a traditional functional decomposition design method program, the OOD program improves extendibility and reliability. (author abst.)

DESCRIPTORS: object oriented programming; communication control; real time processing; hierarchical structure; computer system development; **protocol** ; **multiprocessor** system; operating system; telecommunication ; communication service

BROADER DESCRIPTORS: computer programming; control; treatment; structure; development; rule; computer system(hardware); system; system program; computer program; software; service

CLASSIFICATION CODE(S): JD02010R; ND07010E

11/5/9 (Item 2 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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01376725 JICST ACCESSION NUMBER: 91A0377973 FILE SEGMENT: JICST-E

**A duplexing comparison for digital cordless telephone system.**

**Interference characteristics of TDD and FDD.**

TANAKA KIYOSHI (1); HIRONO MASAHIKO (1)

(1) Nippon Telegraph & Telephone Corp.

Denshi Joho Tsushin Gakkai Zenkoku Taikai Koen Ronbunshu(Spring National Convention Record, the Institute of Electronics, Information and Communication Engineers), 1991, VOL.1991,NO.Spring Pt 2, PAGE.2.342,

FIG.4

JOURNAL NUMBER: G0508ADY  
UNIVERSAL DECIMAL CLASSIFICATION: 621.395  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Conference Proceeding  
ARTICLE TYPE: Short Communication  
MEDIA TYPE: Printed Publication  
DESCRIPTORS: telephone; digital communication; radio transmission;  
TDM(signal); FDM(signal); electromagnetic compatibility; communication  
channel; degradation; multiaccessing; land mobile communication;  
**cordless telephone**  
BROADER DESCRIPTORS: voice communication; telecommunication; communication  
system; method; signal multiplex; **signal processing**; treatment;  
multiplex; modification; interference; electric interference;  
disorder/trouble/obstacle; channel; route; alteration; variation;  
**multiprocessing**; mobile communication  
CLASSIFICATION CODE(S): ND11030P

11/5/10 (Item 3 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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00048911 JICST ACCESSION NUMBER: 85A0146583 FILE SEGMENT: JICST-E  
**Medium capacity Automatic Mobile Telephone System using multi-zone  
structure.**

MATSUYAMA TAKASHI (1); TAKADA FUJIO (1)  
(1) Japan Radio Co., Ltd.  
Nippon Musen Giho(JRC Review), 1984, NO.22, PAGE.20-25, FIG.9, TBL.1  
JOURNAL NUMBER: S0137AAD ISSN NO: 0287-1564  
UNIVERSAL DECIMAL CLASSIFICATION: 621.396.73 621.394/.395  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Original paper  
MEDIA TYPE: Printed Publication  
DESCRIPTORS: car communication; telephone; communication channel capacity;  
digital communication; stored program control system; TDM(signal);  
flexibility; transmission speed; local loop; **multiprocessor** system;  
multiple access communication  
BROADER DESCRIPTORS: land mobile communication; mobile communication;  
telecommunication; voice communication; capacity; communication system;  
method; control system(computer); signal multiplex; **signal  
processing**; treatment; multiplex; modification; property; velocity;  
transmission characteristic; characteristic; communication network;  
information network; network; computer system(hardware); system  
CLASSIFICATION CODE(S): ND08030H; ND11010T

11/5/11 (Item 1 from file: 35)  
DIALOG(R)File 35:Dissertation Abstracts Online  
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01126885 ORDER NO: NOT AVAILABLE FROM UNIVERSITY MICROFILMS INT'L.  
**IMPLEMENTATION ASPECTS OF DECISION FEEDBACK EQUALIZERS FOR MOBILE  
TELEPHONES**

Author: SVENSSON, LARS GOTTFRID  
Degree: FIL.DR  
Year: 1990  
Corporate Source/Institution: LUNDS UNIVERSITET (SWEDEN) (0899)  
Source: VOLUME 51/04-C OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 638. 173 PAGES  
Descriptors: ENGINEERING, ELECTRONICS AND ELECTRICAL  
Descriptor Codes: 0544  
Location of Reference Copy: UNIVERSITY LIBRARY 2, P.O. BOX 1010, S-221  
03 LUND, SWEDEN

The introduction of Time Division Multiple Access transmission in  
**mobile telephone** networks has aggravated the problem of time dispersion

of the received signals. This necessitates the use of receivers that neutralize the time dispersion. The characteristics of the transmission channel change when the mobile moves; therefore, the receiver has to be adaptive to be able to conquer the time dispersion. This thesis treats some implementation aspects of one type of adaptive receiver, the decision feedback equalizer.

It is difficult to find good compromises for cost and performance of an equalizer ASIC. However, the design task is facilitated by CAD tools that let the user explore the design space in a rapid and efficient manner. In this work separate high-level specifications of algorithms and architecture of the equalizer are used. This enables simultaneous and incremental development of both algorithms and architecture.

Chapter 1 describes the **signal processing** design problem, that is, the design of a receiver for digital radio signals. Chapter 2 focuses on CAD systems for digital **signal processing** ASICs. Desirable features of such systems are identified. The systems used in this work are described in some detail. In chapter 3 the numerical algorithms used for decision feedback equalization are presented. Starting with a mathematical formulation, the complications that affect a real-world implementation of an equalizer are introduced one by one. Simulations of the behavior of the algorithms are presented both for floating point and fixed point. Chapter 4 deals with the problem of defining processor architectures that are well suited to execute the algorithms of chapter 3. The set of architectures considered depends on both the algorithms and the CAD systems described in chapter 2. The interaction of the algorithms and the architectures is exemplified and layouts of **several processors** and **processor** sub-units are presented. Finally, chapter 5 summarizes the thesis and presents conclusions and comments.

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15/5/1 (Item 1 from file: 2)  
DIALOG(R)File 2:INSPEC  
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03399930 INSPEC Abstract Number: B89042181, C89042521

**Title: Processor for token ring**

Author(s): Van Gelder, T.

Journal: Elektronika vol.37, no.3 p.24-5

Publication Date: 3 Feb. 1989 Country of Publication: Netherlands

CODEN: LKTND0 ISSN: 0033-7854

Language: Dutch Document Type: Journal Paper (JP)

Treatment: Practical (P); Product Review (R)

Abstract: The author briefly introduces the new commprocessor TMS380C16 network chip from **Texas Instruments** designed to handle the more important elementary communications and protocol functions of token ring networks at a transmission speed of 16 Mbit/s. He summarises the main features of token ring and explains how the new single chip processor performs its tasks (e.g. regulating access and maintaining logical link control). He outlines the three main parts-communication **processor**, **protocol** unit and system interface-and explains the role of internal buses. (0 Refs)

Subfile: B C

Descriptors: microprocessor chips; protocols; token networks

Identifiers: commprocessor TMS380C16 network chip; **Texas Instruments**; protocol; token ring networks; single chip processor; logical link control; communication processor; system interface; internal buses

Class Codes: B1265F (Microprocessors and microcomputers); B6210L (Computer communications); C5130 (Microprocessor chips); C5620L (Local area networks)

15/5/2 (Item 2 from file: 2)  
DIALOG(R)File 2:INSPEC  
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03100079 INSPEC Abstract Number: C88024205

**Title: The design principle of token ring adapter and its programming methods**

Author(s): Zhang Gungzhong; Wang Dexing

Journal: Mini-Micro Systems vol.8, no.4 p.20-55, 19

Publication Date: 1987 Country of Publication: China

CODEN: XWJXEh ISSN: 0364-9342

Language: Chinese Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: The authors introduce the TMS 380 adapter chip set from **Texas Instruments** for the IBM token ring local area network. The TMS 380 chip set consists of : the 38010 communication **processor**; the 38020 **protocol processor**; the 38030 system interface; the 38051 loop interface transceiver; and the 38052 interface controller. The structure and function of each of these chips are described. The design of the 4-bit token ring adapter using the TMS 380 chip set is presented. (4 Refs)

Subfile: C

Descriptors: computer interfaces; local area networks; programming

Identifiers: token ring adapter; programming methods; TMS 380 adapter chip set; **Texas Instruments**; local area network; 38010 communication processor; 38020 **protocol processor**; 38030 system interface; 38051 loop interface transceiver; 38052 interface controller

Class Codes: C5610 (Computer interfaces); C5620L (Local area networks)